

JC17 Rec'd PCT/PTO 10 JUN 2005

SPECIFICATION AMENDMENTS

On page 1, delete line 1.

On page 1, above line 1, insert--Priority Claim

The present application claims priority on European Patent Application 02080230.2 filed 12 December 2002; European Patent Application 03075523.5 filed 24 February 2003 AND European Patent Application 03075712.4 filed 11 March 2003.--

On page 1, above line 1, but below above, insert--Field of the Invention--

On page 1, above line 7, insert--Background of the Invention--

Paragraph on page 2, line 33, ending on page 3, line 6, has been amended as follows:

--The provision of a separate connecting assembly between the tubular ends, allows for adding additional functionality to the system. This functionality can conveniently be provided by a selection of a ~~customised~~ customized connecting assembly, and therefore the system is easily adaptable to custom need. Due to its at least partial reach into the annular space, the connecting assembly is protected from the outside by the tubular ends themselves that are connected by the connecting assembly. --

Paragraph on page 3, line 13 has been amended as follows:

-- The spacer means may comprise adjustment means for adjusting the axial displacement. Herewith it is achieved that the fixture elements can for instance be coupled to their respective tubular ends ~~at an approximated position and in a coarse way~~, while the axial displacement can subsequently be altered in a more controlled way without having to uncouple one or both of the fixture elements. In an embodiment, the adjustment means comprises a thread connection defining a thread path essentially coaxial to the mandrel.--

On page 3, delete line 28-29.

On page 5, above line 32, insert--Brief Description of the Drawing--

On page 6, above line 17, insert--Detailed Description of the Preferred Embodiment --

Paragraph on page 6, line 24, has been amended as follows:

-- The first and second circular tubular ends are rotatably coupled, whereby the second tubular end 1 is inserted into the first tubular end 4. The second tubular end 1 acts as axis mandrel 1, whereas the first tubular end 4 is shown in the form of housing 4. The tubular ends 1,4 are in axial alignment of each other, extending around alignment axis 20.--

Paragraph on page 6, line 31, ending on page 7 line 7 has been amended as follows:

-- An annular space 31 is formed between the axis 1 and the housing 4. A connecting assembly 16 reaches into the annular space 31. The connecting assembly is shown in the form of three transmission units 17,18,19 that are interconnected so as to form a string of interconnected transmission units. It is not essential to the invention to have three transmission units, a different number of transmission units may be preferred. Each transmission unit is in itself arranged for axially coupling the first tubular end with the second tubular end. Mandrel 1 has a bore along axis 20, Axis 2 has a bore of a given diameter, but it may also be a solid mandrel member.--

Paragraph on page 8, line 5 has been amended as follows:

-- Fig. 1 further shows a locking portion L in the axis on the mandrel L 1 which locking portion has a circular circumference, and is provided with locking rim segments 21. Five locking rim segments 21 are shown, but any suitable number depending on strength considerations may suffice. The fixture nut 2 is shaped to embrace the locking portion. The fixture nut 2 is also provided with a number of locking rim segments 22. The number of locking rim segments, in the present embodiment six, is in accordance with the number of locking rim segments 22 on fixture nut 21 in the axis 2. Preferably the axial faces of the locking rim segments 21 22 on the fixture nut axis 2 are essentially in a plane perpendicular to centre center line 20 such that they do essentially not function as thread windings.--

Paragraph on page 8, line 19 has been amended as follows:

-- Cross sections along lines C-C and E-E in the locking portions of the assembly axis 2 are schematically depicted in Fig. 3 and Fig. 5, respectively, showing the housing 4, the fixture nut 2, and the axis mandrel 1. Fig. 3 shows the locking rim segments 21 external on axis mandrel 1, while Fig. 5 shows the locking rim segments 22 provided inwardly in the fixture nut 2. As can be seen, three locking rim segments 22 are provided evenly distributed over the circumference. A different number of locking rim segments is also possible. The total fraction of the circumference that is occupied by the locking rim segments should preferably be at most approximately 50%. --

Paragraph on page 8 line 31, ending on page 9 line 11, has been amended as follows:

-- For instance, by having approximately only half or less of the total circumference covered by the locking rim segments 22, the fixture nut 2 can also have approximately half or less of the total circumference covered by its locking rim segments 22 for optimally spreading the axial load. At the same time the fixture nut 2 be conveniently installed by first shifting it axially through the open slots to the locking portion on the axis mandrel 1, and then, by applying a rotation of the fixing nut 2 relative to the axis mandrel 1, engaging the external rim segments 21 on the axis mandrel 1 and the internal rim segments 22 in the nut. Preferably, a securing device, such as a bolt, should may be applied such that any relative rotation between the axis mandrel 1 and the fixture nut 2 is prevented and the locking rim segments 21,22 remain engaged for axial load transfer.--

Paragraph on page 9, line 12 has been amended as follows:

-- It will be understood that the remainder of the axis between its end and the locking portion should preferably either have a sufficiently small external diameter, or sufficiently large segments wherein the external diameter is sufficiently small to enable the shifting of the fixture nut 2 to the locking portion. In Fig. 2, for instance, can be seen spline segments 23, which spline segments 23 have a larger external diameter than the majority of the axis mandrel 1, and the orientation of which on the axis mandrel 1 axially corresponds to that of the locking rim segments 21.--

Paragraph on page 10, line 8 has been amended as follows:

-- The bearings 10 are mounted in between the housing fitting 6 and a sliding ring 11. On the axis mandrel 1 the earlier mentioned spline profile 23 has been provided at the position underneath the sliding ring 11, for instance by machining. A corresponding opposite profile 24 has been provided on the inner of the sliding ring 11, for instance by machining. This is best shown in Fig. 4 in the cross section along line D-D. The siding ring 11 is therefore able to freely slide along the axis mandrel 1, whereby the interlocking spline profiles 23,24 prevent any relative rotation.--

Paragraph on page 10, line 25 has been amended as follows:

-- As can be seen in Fig. 1, the sliding rings 11 extend underneath the bearings 10 on one side, and underneath the spring support ring 12 and spring 13 on its other side, such that these are centred on the axis mandrel 1.--

Paragraph on page 11, line 3 has been amended as follows:

-- The adjustment nut 15 has an internal spline profile 25, which allows it to be slid though the previously mentioned various splines and rim segments present along the axis during installation and/or mounting. At the position underneath adjustment nut 15 the axis mandrel 1 is spline free. The adjustment nut 15 is connected to the fixture nut 2 via a threaded profile 26 that essentially defines a threaded path that is coaxial to the axis 1.--

Paragraph on page 11, line 21 has been amended as follows:

-- Because of the above described design, the adjustment nut 15 can be rotated about the alignment axis 20 and relative to the fixture nut 2 and, when the fixture nut is in locked position, relative to axis mandrel 1. This rotation will be accompanied by an axial displacement of the adjustment nut 15 relative to the fixture nut 2, due to the lead of the threaded connection between the adjustment nut 15 and the fixture nut 2.--

Paragraph on page 11 line 33, ending on page 12 line 5, has been amended as follows:

-- Securing device 3, suitably a bolt, is provided such that any relative rotation between the axis mandrel 1 and the fixture nut 2 is prevented and the locking rim segments 21,22 remain engaged for axial load transfer. Adjustment opening 27 is provided

in the housing 4 to allow adjustment of adjustment nuts 15 with the housing 4 in position. If desired, pretension in spring 13 can be adjusted this way.--

Paragraph on page 12, line 10 has been amended as follows:

-- For play-free assembly of the connecting assembly 16 onto axis mandrel 1, an additional assembly tool may be applied that is temporarily placed over the connecting assembly when the housing 4 is not yet in place. This is particularly useful in the case that the connecting assembly comprises bearings. The assembly tool (not shown) may have two strips with pins that have the same diameter as the openings provided in housing 4. The positions of the pins on the strips of the assembly tool have been calibrated and fixed to the positions of the openings in the housing 4. After the calibration of the assembly tool pin positions, all internal parts of the connecting assembly are mounted on the axis mandrel 1. Hereby, the fixture nuts 2 have already been locked to the axis mandrel 1. All other parts are still loose in axial direction. Then the assembly tool is mounted along axis mandrel 1, via a clamping ring. In addition, the pins on the assembly tool strips are temporarily fixed to the housing fittings 6.--

Paragraph on page 13, line 4 has been amended as follows:

-- The above described embodiments allow for a reliable transfer of axial force from the axis mandrel 1 to the housing 4. The bearings can be centred, and the embodiment allows for a bearing suspension plane that is perpendicular to the alignment axis of the housing 4 and the axis 2. Moreover, the bearings are mountable on the axis 2 without axial play or each having the same axial play.--

On page 14, after line 16, insert the following paragraph:

----While the illustrative embodiments of the invention have been described with particularity, it will be understood that various other modifications will be readily apparent to, and can be easily made by one skilled in the art without departing from the spirit of the invention. Accordingly, it is not intended that the scope of the following claims be limited to the examples and descriptions set forth herein but rather that the claims be construed as encompassing all features which would be treated as equivalents thereof by those skilled in the art to which this invention pertains.--